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## **APPLICATION FOR UNITED STATES PATENT**

Title:           **METHOD OF WINDING TWO OVERLAPPED  
SHEETS WITH PREAPPLIED SEAM TAPE**

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## **SPECIFICATION**

**METHOD OF WINDING TWO OVERLAPPED SHEETS WITH  
PREAPPLIED SEAM TAPE**

**Background**

5                   Single-ply membrane sheeting incorporates a single-ply  
membrane as a water barrier for a roof surface, pond liner, or the like. As  
it is impractical to manufacture sheeting wide enough to cover an entire  
roof or pond, individual sheets are adhered together along lap seams to  
form a continuous water impervious sheet.

10                   In the past the lap seams have been completely formed at  
the construction site. This requires that, when necessary, the overlapping  
edges be cleaned, a primer applied and then an adhesive. Adhesive  
seam tape is frequently used to form a lap seam. There are a variety of  
different seam tapes that can be applied. These are very tacky. Upon  
contact they adhere to the sheeting.

15                   In order to reduce on-site labor, it is desirable to have the  
seam tape preapplied to the roofing membrane. Unfortunately, when one  
preapplies seam tape to the edge of a membrane, it interferes with  
storing and shipping the sheeting. Typically the sheeting is rolled onto a

cylindrical core. Because ordinary sheeting has a uniform thickness, one can roll an indefinite length of material on the core. However, when a seam tape is applied to the edge of the sheeting, it cannot be simply rolled. The seam edge is nearly twice as thick as the remaining portion  
5 of the sheet. Rolling this would form a conical-shaped roll. This interferes with shipping.

### **Summary of the Invention**

The present invention is premised on the realization that membrane sheeting with preapplied seam tape along one edge can be  
10 rolled up into a roll having a generally uniform diameter across the length of the roll by rolling two membrane sheets together at the same time. The first sheet will have the seam tape along one edge, preferably facing upward. The second sheet will have the seam at the opposite end, preferably facing downward with the non-seam tape edge of each sheet  
15 abutting the seam tape of the overlying or underlying sheet. Thus the two sheets do not cover the seam tape of the adjoining sheets thereby maintaining a uniform thickness across the entire sheet. This can easily be rolled up and shipped.

The objects and advantages of the present invention will be  
20 further appreciated in light of the following detailed description and drawings in which:

### **Brief Description of the Drawings**

Fig. 1 is a cross-sectional view taken at lines 1-1 of Fig. 2 with a diagrammatic depiction of the placement of an adjoining sheet.

Fig. 2 is a perspective view of the sheeting of the present invention as it is rolled up.

**Detailed Description**

As shown in Fig. 1, the present invention is roof sheeting 12 which incorporates a field portion 13 and an edge portion 14. Edge portion 14 includes a layer of seam tape 15 applied along the edge. As shown, there is a first sheet 12 and a second identical sheet 16 used to form roll 17.

The membrane sheeting can be any material used for roofing and pond liner application. These include EPDM, thermoplastic elastomers, butyl rubber, PVC, and the like. The thickness of the membrane can be 30 to 60 mils, and is generally 45 to 60 mils. The thickness of the tape is less than or equal to the thickness of the membrane, and is generally 35 mils.

The seam tape may be any type of seam tape used in the roofing industry. It may be thermoplastic or thermosetting. Preferably, it is a pressure sensitive tape. There are several commercially available seam tapes available for use in the roofing industry. Although the width of the seam tape can vary depending on type and application requirements, it will generally be at least about 3 inches wide.

The method of applying the seam tape 15 to the membrane sheeting 12 of the present invention does not form part of the present invention. The seam tape is generally applied in the factory by first applying a primer layer along the clean edge 14 of the membrane.

Subsequently the seam tape 15 is pressed against the membrane along the edge 14. The exposed surface of the seam tape is generally covered with a protective release sheeting (not shown).

One way to apply the seam tape is to roll a length of roofing  
5 membrane onto a surface such as a floor and manually apply the tape. The roofing membrane is preferably clean sheeting. If not, any talc or the like must be removed prior to application of the tape.

Alternatively, a double wide tape (i.e., 6-7 inches wide) can  
be applied along the center line of the sheeting. The sheeting can then  
10 be cut along the center of the seam tape to form two sheets of equal width. Again, the method of forming the sheeting with the applied seam tape forms no part of the present invention.

As shown in the present invention, sheet 12 is formed with  
the seam tape 15 at edge 14 and the opposite edge 18 being uncoated.  
15 The second sheet 16 is oriented so that the seam tape 20 covered edge 21 is opposite edge 14 of sheeting 12. Sheet 12 is placed directly onto sheet 16 as indicated by arrows 22. The inner edge 23 of the seam tape 15 is juxtaposed to the edge 24 of sheet 16. As shown, the seam tapes 15 and 20 face in opposite directions. It is also possible to have  
20 the seam tapes facing the same direction as long as the uncoated edge 18 of sheet 12 does not overlie the seam tape coated edge 21 of sheet 16. Preferably, both sheets have the same width.

Once the two sheets are positioned on each other, they can be rolled in a standard fashion on a cardboard roll 26 permitting them to

be easily moved and shipped to the job site. Thus, there will be no bulges at either edge of the roll 17.

5 One on the job site, both sheets would be unrolled, separated and positioned for use. Because they have the preapplied seam tape, lap seams can be more easily formed between the seam tape coated edge of one membrane with the non-coated edge of an adjacent membrane.

10 This has been a description of the present invention along with the preferred method of practicing the present invention. The invention itself should only be defined by the appended claims whereby we claim: